



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/826,388	04/19/2004	Norio Koma	57810-100	9741

7590 02/23/2007
McDERMOTT, WILL & EMERY
600 13th Street, N.W.
Washington, DC 20005-3096

EXAMINER

VU, PHU

ART UNIT	PAPER NUMBER
----------	--------------

2871

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	02/23/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	10/826,388	KOMA ET AL.	
	Examiner	Art Unit	
	Phu Vu	2871	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 November 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1, 3-4, 6-13, 15, 18-34 is/are pending in the application.
- 4a) Of the above claim(s) 5, 16 and 17 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 3, 4, 6-13, 15 and 18-34 is/are rejected.
- 7) ☒ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

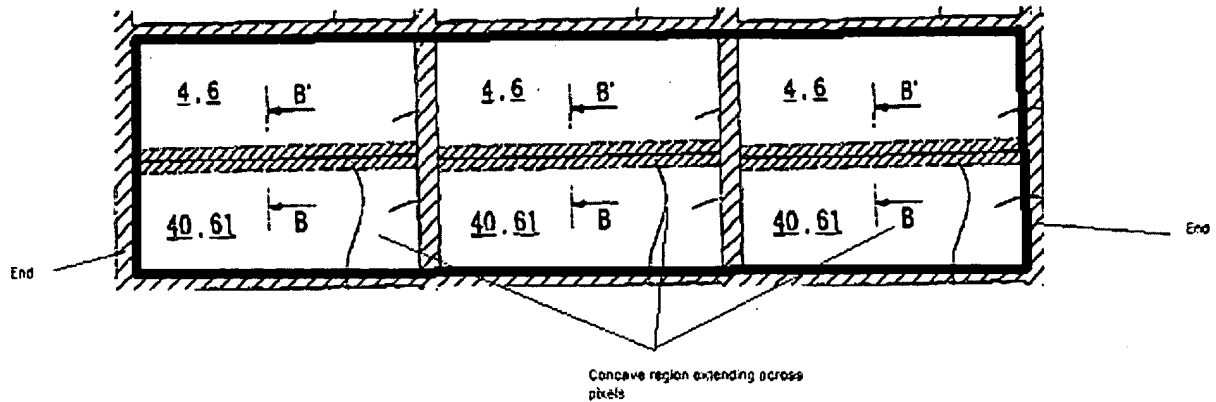
- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

Applicant's arguments filed 11/9/2006 have been fully considered but they are not persuasive. Applicant has argued that Ozawa fails to teach the end of the concave region is superimposed on a boundary between the display region and non-display region and thus outside of the display region. However this assumes that a boundary between the display region and non-display region is a part of the display region. At the "Ends" marked below this region could also be considered a part of the nondisplay region as there is no display region outside of the marked end regions as everything inside the outlined box (see below) could be interpreted as part of the display region and everything outside of the box can be considered a part of the nondisplay area which includes the border area.

In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., prevention of deterioration of display quality from having the orientation film not formed along the slant face) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).



Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-4, 6-7, 9-15, 18-19, and 21-24 are rejected under 35 U.S.C. 102(e) as being anticipated by Ozawa 6956632.

Regarding claims 1, 3 and 13-14, Ozawa teaches a display consisting of a plurality of pixels including transmissive and reflective regions comprising: a convex region having a convex insulating film (fig. 4B element 60) formed in a region corresponding to said reflection region (31) on a substrate, an orientation film (12) formed so as to cover said convex insulating film and second region, wherein a second

region in which said convex insulating film, wherein a second region in which said convex insulating film is not formed is continuously formed among adjacent pixels (region 32). The reference shows at both ends of the second region is disposed outside of the display region (see fig. 4A).

Regarding claim 4, the reference shows the second region formed continuously among adjacent pixels in a first direction (see figure 4A).

Regarding claim 6 and 18, the reference teaches the substrate being the substrate in which the TFT is formed (4B element 10).

Regarding claim 7 and 19, the reference teaches the substrate is said substrate in which the TFT is not formed (see fig. 8 element 20) and further comprises a color filter formed between said substrate and said orientation layer (see fig. 8 element 22).

Regarding claim 9 and 21, the reference teaches the substrate in which the TFT is not formed and said convex insulating film comprises an insulating part integrally formed in said substrate (see fig. 8 element 6).

Regarding claims 10-11, and 22-23, the reference teaches the second region so as to have a narrowed part between said adjacent pixels and provided at a boundary between said pixels (see fig. 4A). The claim recites a "narrowed" part between adjacent pixels however this does not exclude an interpretation of the entire second region being narrowed. Therefore it will be narrowed at the pixel boundary and the pixel region.

Regarding claim 12 and 24, the reference teaches the second region is formed so as to extend in the first direction and divided into a plurality of regions along a first direction (see fig. 4A).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 8 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ozawa in view of Fujimori US 20030063244.

Regarding claims 8 and 20, Ozawa discloses all the limitations of claims 8 and 20 except, a color filter having an opening at a part corresponding to a reflective region. Fujimori teaches color filters in a transfective display having an opening (fig. 10 44a1) corresponding to the reflective region that improves display quality/ improves brightness (see [0011-0012]). Therefore, at the time of the invention, it would have been obvious to one of ordinary skill in the art to apply a color filter having an opening corresponding to the reflective region to improve display quality/brightness.

Claims 25-28 and 29-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over by Ozawa 6956632 and further in view of Sakamoto 7015996.

Regarding claims 25-26, Ozawa teaches a display consisting of a plurality of pixels including transmissive and reflective regions comprising: a convex region having a convex insulating film(fig. 4B element 60) formed in a region corresponding to said reflection region (31) on a substrate, an orientation film (12) formed so as to cover said convex insulating film and second region, wherein a second region in which said convex

Art Unit: 2871

insulating film, wherein a second region in which said convex insulating film is not formed is continuously formed among adjacent pixels (region 32). The reference shows at both ends of the second region is disposed outside of the display region (see fig. 4A). Ozawa fails to teach a film thickness of 2 microns however Sakamoto discloses a transfective display with optimal thickness for each layer (see fig. 9 $d_{r0} = 2$ microns) for maximized transmittance and reflectance values (see column 7 lines 35-45). Therefore, at the time of the invention it would have been obvious to one of ordinary skill in the art to set the concave insulation layer to 2 microns to maximize transmittance and reflectance values.

Regarding claim 27, the reference shows the second region formed continuously among adjacent pixels in a first direction (see figure 4A).

Regarding claim 28, the reference teaches the substrate being the substrate in which the TFT is formed (4B element 10).

Regarding claim 29, the reference teaches the substrate is said substrate in which the TFT is not formed (see fig. 8 element 20) and further comprises a color filter formed between said substrate and said orientation layer (see fig. 8 element 22).

Regarding claim 31, the reference teaches the substrate in which the TFT is not formed and said convex insulating film comprises an insulating part integrally formed in said substrate (see fig. 8 element 6).

Regarding claims 32-33, the reference teaches the second region so as to have a narrowed part between said adjacent pixels and provided at a boundary between said pixels (see fig. 4A). The claim recites a "narrowed" part between adjacent pixels

Art Unit: 2871

however this does not exclude an interpretation of the entire second region being considered a narrowed part of the convex insulation film. Therefore it will be narrowed at the pixel boundary and extend throughout the pixel region as well

Regarding claim 34 the reference teaches the second region is formed so as to extend in the first direction and divided into a plurality of regions along a first direction (see fig. 4A).

Claim is 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ozawa in view Sakamoto and further in view of Fujimori US 20030063244.

Regarding claims 30, Ozawa and Sakamoto discloses all the limitations of claim 30 except a color filter having an opening at a part corresponding to a reflective region. Fujimori teaches color filters in a transfective display having an opening (fig. 10 44a1) corresponding to the reflective region that improves display quality/ improves brightness (see [0011-0012]). Therefore, at the time of the invention, it would have been obvious to one of ordinary skill in the art to apply a color filter having an opening corresponding to the reflective region to improve display quality/brightness.

Conclusion

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any

Art Unit: 2871

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Phu Vu whose telephone number is (571)-272-1562.

The examiner can normally be reached on 8AM-5PM M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Nelms can be reached on (571)-272-1787. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Phu Vu
Examiner
AU 2871


ANDREW SCHECHTER
PRIMARY EXAMINER